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## OPEN SYSTEMS STORAGE – HIGH AVAILABILITY

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*Open Systems Storage – High Availability* provides high speed storage on a Storage Area Network (SAN) device external to the server where the application resides. Redundancy and hot spares are built into the SAN to provide protection for the data from equipment failure. This product differs from Open System Storage because it is provided on faster fibre channel disk drives with faster I/O capacity. Storage is provided to agencies on a Logical Unit Number (LUN) basis. With the assistance of the storage administrator and system administrators, the customer specifies the number and the size of each LUN. LUNs can be configured in increments of 1GB. Connectivity to this storage is provided through high-speed Fibre Channel networks via host bus adaptors (HBA) and is suitable for mission critical applications. Because of the need for redundancy (Raid 5) to protect data the storage arrays require approximately 20% in disk space overhead. The customer is charged for the total amount of space required to provide the useable space requested.

### PRODUCT FEATURES AND DESCRIPTIONS

FEATURE	DESCRIPTION
Fast Disk Drives	10,000 rpm drives.
High I/O Capability	Up to 50,000 I/O's per second. Full duplex that enables data to be transmitted and received at the same time.
Data Safety	Redundant, fault-tolerant hardware and RAID protection provide high availability for high-profile applications. Currently all data is protected with Raid 5.
Flexible Support	Support for a wide array of operating systems and hardware platforms, i.e., Sun/Solaris, IBM/AIX, HP/UX, MS/WIN NT, MS/WIN 2000, MS/WIN 2003, Linux, Netware.
Physically Safe and Secure Environment	A secure, climate-controlled environment.
Monitoring	24x7 monitoring.
Reliable power	Reliable uninterruptible power with UPS, battery, and generator backup.

Disk Drives	300 GB Fibre Channel hard drives.
High Availability	Dual server connectivity for high availability of access to data stored.
Storage Management	Trained, professional storage administrators managed the storage arrays.

### FEATURES NOT INCLUDED

FEATURE	EXPLANATION
Open Systems Storage	Open Systems Storage resides on SATA disk drives that do not provide the higher availability and reliability associated with fibre channel disk drives.
Qualified Dedicated Storage	DET offers a dedicated disk storage environment for those customers that want to store large amounts of static, non-critical data at a lower cost.
Backup and Restore Services	Backup and restore services are recommended, but are sold separately.

### RATES AND BILLING

FEATURE	DESCRIPTION	FY10 BASE RATE
Monthly Charges	Disk space allocated	\$.0004/MB (\$0.40/GB)

### ORDERING AND PROVISIONING

Any government agency interested in purchasing mid-tier storage can fill out the on-line order form by going to: [http://dts.utah.gov/services/enterprise/forms/storage/open\\_systems\\_storage/index.php](http://dts.utah.gov/services/enterprise/forms/storage/open_systems_storage/index.php) and selecting the Order Form from the right panel. Or you may contact your assigned [Customer Relationship Manager](#). The provisioning process includes these steps:

1. The customer agency fills out the on-line order form or contacts their Customer Relationship Manager (CRM).
2. When submitted, the form is sent to DET CRMs, storage administrators, and the DET [Service Desk](#). The DET Help Desk initiates a Remedy Service Request order that is sent to the storage administrators. This is to ensure that the customer's request is tracked and follow-up is performed.
3. If needed, the CRM works with the storage administrator and arranges for a needs assessment meeting between the customer agency and DET. In this meeting the amount of storage, time frames for completion, and other parameters for the project are established.
4. The customer agency provides approval to DET to provision the required storage space.
5. DET storage administrators provision the required disk space.
6. The agency and DET coordinate efforts to connect the agency's servers to the provisioned space.
7. Service and billing begins.

### DTS/DET RESPONSIBILITIES

All storage hardware is maintained by DET with full support by the hardware vendor.

DET provides 24x7 monitoring of the storage environment.

## DTS/AGENCY RESPONSIBILITIES

Purchase of Host Bus Adaptors (HBAs) or Network Interface Cards (NIC) for servers to attach to the storage array are the customer's responsibility. Before purchasing these interface devices, check with DET to ensure compatibility. If dual HBA connectivity is required, Agency will be required to purchase a copy of PowerPath software.

## GENERAL SERVICE LEVELS AND METRICS

All technical incidents and service requests, and certain types of orders, related to products and services provided by DTS will be reported to the DTS Enterprise Service Desk or to specialized Help Desks that support State agencies or DTS divisions and regions. All incidents and requests will be captured in the DTS Remedy Help Desk application. DTS staff will provide timely acknowledgement and resolution of technical incidents and service requests.

DTS support staff, including staff directly assigned to the DTS Enterprise Service Desk, will exert all reasonable efforts to meet the Time to Initial Response (TIR) and Total Time to Resolution (TTR) targets set forth below.

The DTS Enterprise Service Desk is accessible 24x7 by telephone at 801-538-3440 or 800-678-3440. Live chat and direct user reporting of incidents are also available on the DTS website at [dts.utah.gov](https://dts.utah.gov). Published "Business Hours" for the DTS Service are 7:00 AM-6:00 PM, Monday-Thursday. Hours of support/on-call coverage varies by agency/division/region and product.

### Incident Response and Resolution Targets

Time to Initial Response Targets	% Tickets	Total Time to Resolution Targets	% Tickets
Low priority – 1 Business hour	75%	Low priority - 6 Business hours	75%
Medium priority – 1 Business hour	75%	Medium priority - 4 Business hours	75%
High priority – Attempt Warm Transfer	90%	High priority - 3 Clock hours	75%
Urgent priority – Immediate Warm Transfer	95%	Urgent priority - 3 Clock hours	100%

### Customer Satisfaction Surveys and Reporting

All users/customers whose technical incidents are resolved by DTS staff will be given the opportunity to respond to an on-line survey regarding their level of satisfaction with the support received from DTS. Responding to the survey is voluntary.

Periodic reports will be created showing the level of satisfaction with resolution of incidents by specific support groups and the level of satisfaction of users by agency.

### Customer Satisfaction Targets

Metric Description	Target
Average level of satisfaction with resolution efforts	≥ 4.2 on a scale of 0 - 5
Percentage of respondents expressing satisfaction (vs. dissatisfaction)	93% of respondents satisfied